

WHAT IS CLAIMED IS:

1. A thermoplastic impact-reinforced polyamide composition comprising:

I) from 60 to 99% by weight of the total weight of the composition of at least one
5 polyamide (I);

II) from 1 to 40% by weight of the total weight of the composition of at least one
block copolymer (II) corresponding to the following general formula Y-B-Y'
wherein:

- B is an elastomeric block thermodynamically incompatible with the Y and Y' blocks,

10 - Y and Y',

at least one of the two blocks Y and Y' being partially or entirely composed of poly(methyl
methacrylate); and

III) from 0 to 20% by weight of the total weight of the composition of at least one
impact additive,

15 the total of (II) and (III) not exceeding 50% by weight.

2. The composition as claimed in claim 1, comprising:

from 70 to 98% by weight of (I)

from 2 to 30% by weight of (II).

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3. The composition as claimed in claim 1 wherein B comprises at least one monomer
unit selected from the group consisting of butadiene, isoprene, 2,3-dimethyl-1,3-butadiene,
1,3-pentadiene or and 2-phenyl-1,3-butadiene.

25 4. The composition as claimed in claim 3, wherein B comprises butadiene.

5. The composition of claim 1, wherein Y and Y' comprise at least one monomer unit
chosen from styrene and short-chain alkyl methacrylates.

30 6. The composition as claimed in claim 5, wherein Y is a block composed predominantly

of styrene and wherein Y' is a block composed predominantly of methyl methacrylate syndiotactic to a level of greater than 60%.

7. The composition as claimed in claim 1, wherein the impact additive comprises an
5 elasomer.

8. The composition of claim 1, wherein the polyamide (I) is at least one polyamide
selected from the group consisting of polyamides -4, -6, -10, -11, -12, -4,6, -6,9, -6,10, -6,12
and -12,12.

10 9. A polyphase composite material comprising the composition of claim 1 and at least
one fiber compound selected from the group consisting of glass fibers, carbon fibers, fibers
derived from carbon, metal fibers, and textile fibers.

15 10. A polymer alloy comprising the composition of claim 1 and at least one compound
selected from the group consisting of polyamides and polyolefins.

11. A thermoplastic object comprising the composition of claim 1, formed by injection
molding, extrusion, blowing or molding.

20 12 – 14 (canceled)

15. The composition of claim 5, wherein Y and Y' comprise methyl methacrylate.

25 16. The composition as claimed in claim 7, wherein the impact additive elastomer
comprises EPDM or elastomeric polyolefins..